# **Test Execution**

A Test Execution is an issue type that aggregates a user-determined collection of Tests. It monitors and verifies if those Tests are working as expected in a target context and environment. Through the Overall Execution Status, updated as each test is being performed, the user is informed about the progress of the Test Execution, including which tests passed, failed, are being executed or waiting to be performed.

An association between a Test Execution issue and a Test issue is called a Test Run. Hence, a Test Execution is composed of a list of Test Runs.

A Test Execution issue can be assigned to a Tester. It is also possible to assign individual Test Runs to several Testers.



#### **Sub Test Execution**

You can create a Test Execution as a Sub-Task in the Requirement Issue View Page. Learn more here.

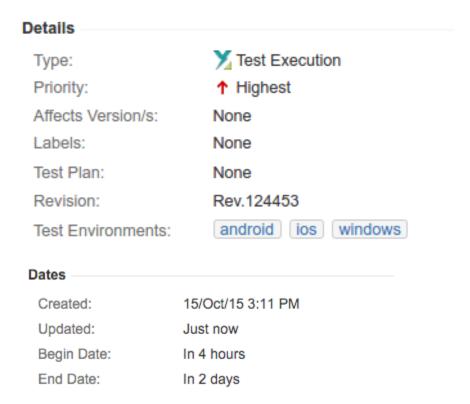
- Fields
- Sections
  - Tests Section
    - Overall Execution Status
    - Test Run Filters
    - Test Runs Table
- Actions
  - Create
  - o Edit
  - Clone
  - Adding Tests
    - Add Tests
      - Add Tests from Test Sets
  - Associate with a Test Plan
  - Remove Tests
  - Assigning Work
  - Change Test Run Rank
    - Drag-and-Drop
    - Change Rank Action
  - o Execute Test
  - Execute Test Inline
  - View Test Run Details
  - Bulk Operations
  - Filter Test Runs
  - O Configure Test Run Columns
  - Export to Cucumber
  - Export Test Runs to CSV
  - Import Automated Test Results
    - Importing from Test Execution view issue screen
    - Importing from the Execution Details Page

# **Fields**

A Test Execution has the following custom fields:

- Begin Date the date the Test Execution is planned to start
- End Date the date the Test Execution is planned to end
- Revision the current source code and documentation version used in the Test Execution
- Test Environments environments in which the Test Run is executed

These custom fields are located in the native Jira sections. The revision can be found in the **Details** section of the Test Execution issue while the Begin and End dates are located in the **Dates** section.



# **Sections**

Xray contributes an additional section to the Test Execution view issue screen.

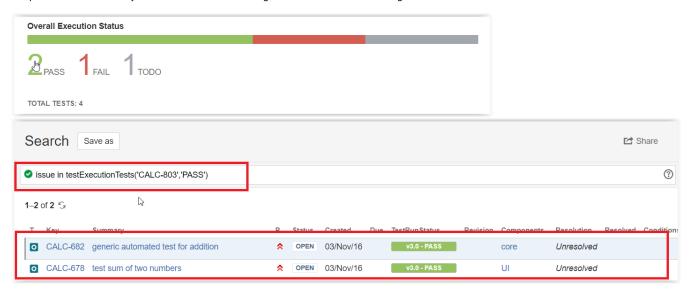
## **Tests Section**

The Tests section provides the following views:

## **Overall Execution Status**

This view has a colored progress bar where you can clearly see the status of a Test Execution. Final statuses float to the left side; the last status color to appear is the TODO status.

It is possible to filter tests by status in Test Execution Progress Bar as shown in the image below:



### **Test Run Filters**

A filter section is also present above the Test Runs table to allow you to filter Test Runs by Assignee, Status, Test Set, or open text.

### **Test Runs Table**

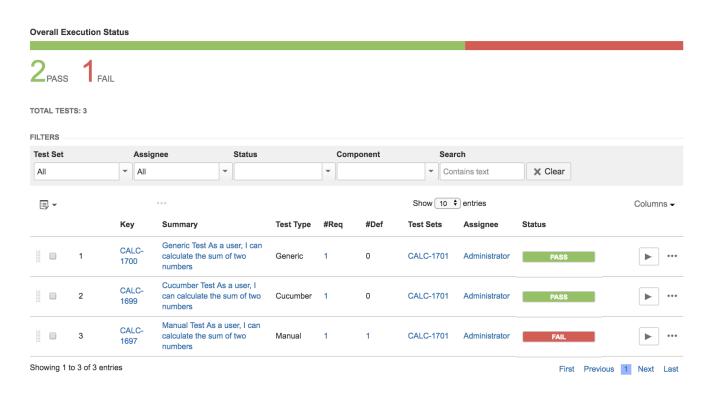
The Tests section provides a table with all Test Runs created for the Test execution issue. Each row in this table represents a Test Run and contains a set of actions that can be performed over a Test Run.

The Columns table can be configured by you. It also provides bulk operations and drag-and-drop to change rank of Test Runs.

When Xray is installed, the default columns are: Rank, Key, Summary, Test Type, #Req, #Def, Test Sets, Assignee and Status where Rank and Status are fixed and cannot be removed or changed.

The **#Req** column provides the number of **Requirements** that are tested with each Test issue.

The **#Def** column provides the number of **Defects** created during the Test Execution or already related to the Test issue. For more information on how the calculation is done for this field, please refer to Defects Count.



# **Actions**

- Tests Section
- Create
- Edit
- Clone
- Adding Tests
- Associate with a Test Plan
- Remove Tests
- Assigning Work
- Change Test Run Rank
- Execute Test
- Execute Test Inline
- View Test Run Details
- Bulk Operations
- Filter Test Runs
- Configure Test Run Columns
- Export to Cucumber
- Export Test Runs to CSV
- Import Automated Test Results



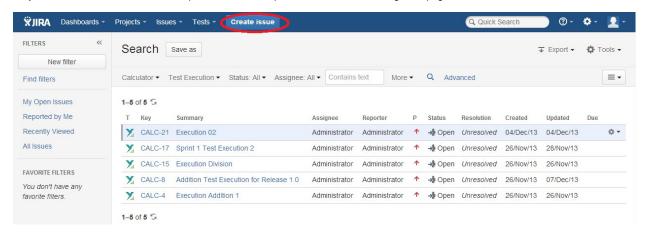
#### NEW

Now it is possible to filter tests by clicking on "Overall Execution Status" in Test Execution Progress Bar

### Create

To create a new Test Execution Issue,

Step 1: Click the Create Issue at the top of the screen to open the Create Issue dialog box / page.



Step 2: Select the Project and on Issue Type, select Test Execution.

Step 3: Under the General tab, type a Summary for the test execution and fill all appropriate fields — mandatory fields are marked with an asterisk.

Step 4: Under the Test Execution Details tab, you can populate the Test Execution custom fields provided by Xray, namely, the Begin/End date and the Revision. In this tab, you can also associate Tests or Test Sets to create Test Runs.

Optional: To create a series of similar test executions – within the same Project – select the Create another checkbox at the bottom of the dialog.

Step 5: When you are satisfied with the content of your test execution, click the Create button.

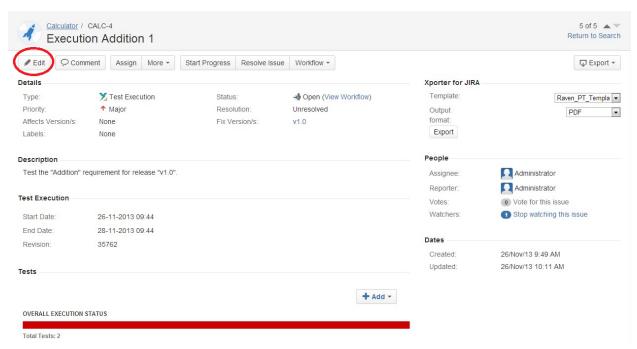
Step 5a: If you selected the Create another checkbox, a new Create Issue dialog appears. This issue is automatically pre-populated with your previous test execution details, while leaving the Summary field blank.

Create Issue	Configure Fields ▼
Project <sup>*</sup>	
Issue Type*	
General Test Execution Details	
Begin Date 30/Aug/16 12:00 AM	
The start date for the test execution	
End Date 31/Aug/16 12:00 AM	
The finish date for the test execution	
Revision 851667d116af9c6d60e426459745414dc7fd385	
The system revision for the test execution	
Tests TCSS-3 ×	+
Associate tests or test sets with this test execution	
□ Create an	nother Create Cancel

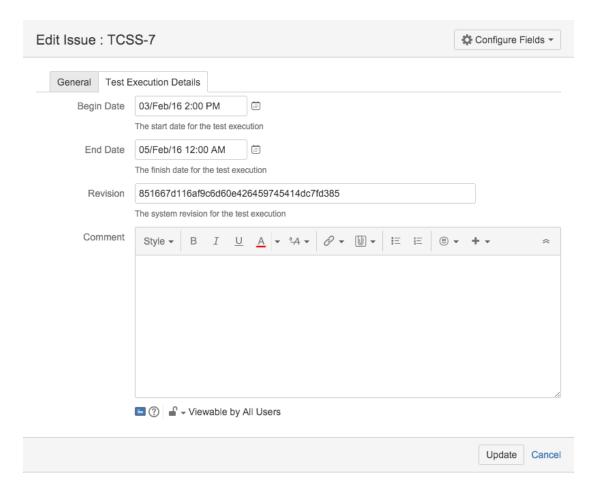
## Edit

The Edit Issue dialog box / page is similar to the Create Issue dialog box / page, and can be accessed through the following steps:

- Step 1: Locate the Test Execution you want to edit.
- **Step 2**: Click the **Edit** button (at the top-left of the 'view issue' page) to open the **Edit Issue** dialog box / page. Alternatively, hover over a field and click the pencil icon to edit it inline.



- Step 3: Modify your Test Execution details in the appropriate fields using either the General or Test Execution Details tab of the Edit Issue view.
- Step 4: Click the Update button to save your changes.



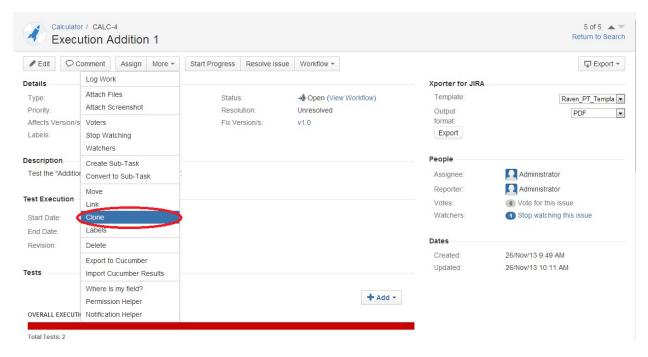
## Clone

When cloning a Test Execution issue, all the Test issue associations will also be cloned. However, a new Test Run is created for each Test so that the new Test Execution issue has no execution state. Also:

- If the test execution contains links to other issue(s), you can select whether or not to include the links in the new clone test execution.
- If the test execution contains sub-tasks, you can select whether or not to create the sub-tasks in the new clone test execution.
- If the test execution contains attachments, you can select whether or not to include the attachments in the new clone test execution.

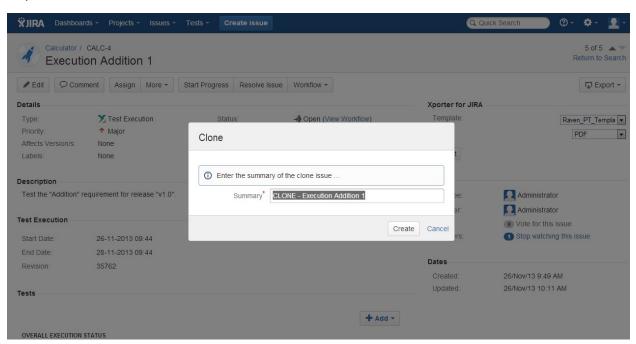
To clone an existing Test Execution issue:

- Step 1: Open the Test Execution you wish to clone.
- Step 2: Select More > Clone. The Clone Issue screen will appear.



Step 3: Edit the clone Test Set's Summary if you wish.

Step 4: Click Create.



## **Adding Tests**

Tests and Test Sets can be associated with Test Execution issues.

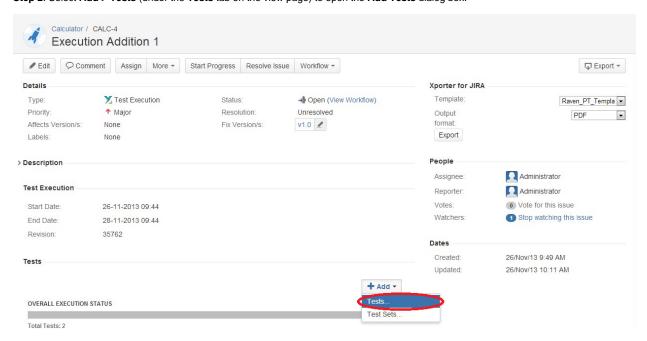
- Add Tests
- Add Tests from Test Sets

## **Add Tests**

To add Test issues to a Test Execution:

Step 1: Open the Test Execution you wish to associate a Test with.

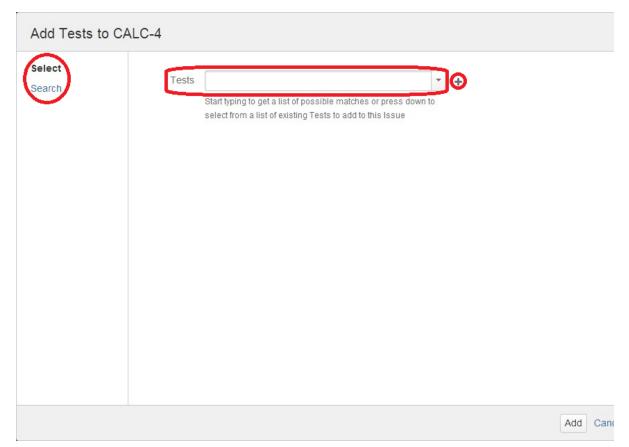
Step 2: Select Add > Tests (under the Tests tab on the view page) to open the Add Tests dialog box.



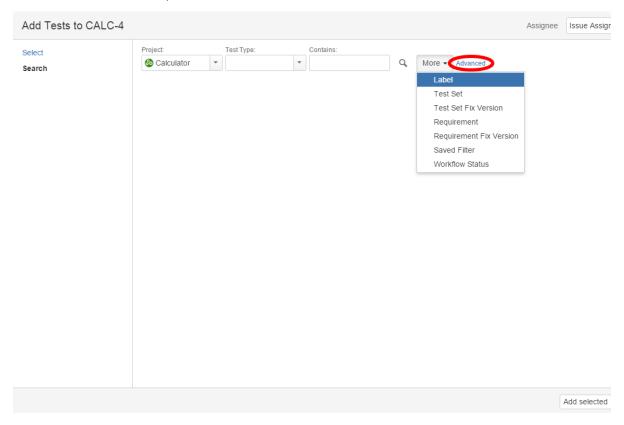
Step 3: Select or search the Test issues to be associated with the Test Execution:

Select Test Issues - In order to select the Tests to be associated, you can, under the Select tab:

- Input the desired Test Issue Key on the Tests field.
- Click on the **Down Arrow** on the Tests field and select the Test from its **History Search** list.
- Click on the + button wich will prompt an Issue Selector Pop-Up.
- Click on the Search tab to use the Find Jira issues browser.



- Browse for the desired Test Project, Type or terms it Contains.
- Click on the More button to add more browse fields such as Label, Test Set, Test Set Fix Version, Requirement, Requirement Fix Version, Saved Filter and Workflow Status.
- Click on the Magnifier button after filling out the browse fields to get a list of matching entries
- Click on the **Advanced** button to perform a JQL search.

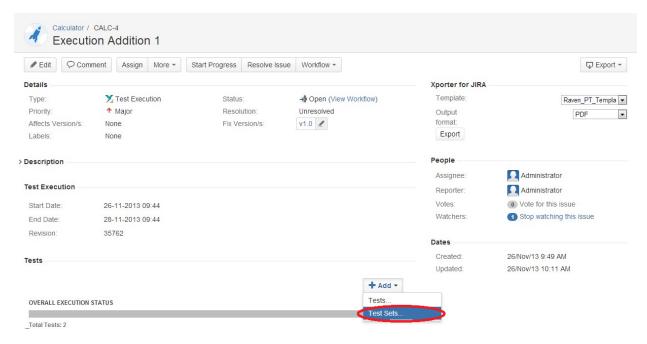


Step 4: Click Add.

## **Add Tests from Test Sets**

When adding a Test Set issue to a Test Execution, all the Test issues associated with the Test Set are added to the Test Execution. The Test Set issue is not directly associated with a Test Execution. so changes to the Test Set after it was added will not affect the Test Execution.

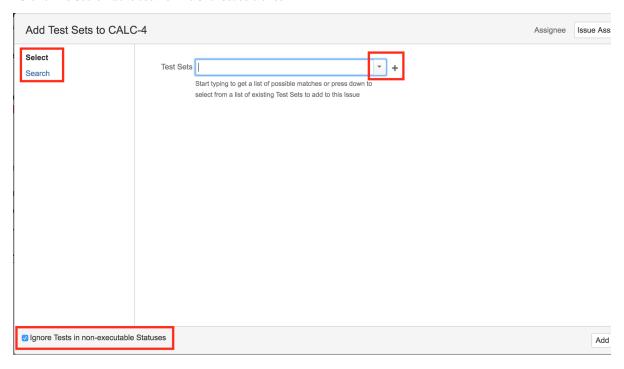
- Step 1: Open the Test Execution you wish to associate a Test Set with.
- Step 2: Select Add > Tests (under the Tests tab on the view page) to open the Add Test Sets dialog box.



Step 3: Select or search the Test Set issues to be associated with the Test Execution.

Select Test Set Issues - In order to select the Test Sets to be associated, you can, under the Select tab:

- Input the desired Test Set Issue Key on the Test Sets field.
- Click on the Down Arrow on the Test Sets field and select the Test Set from its History Search list.
- Click on the + button wich will prompt an Issue Selector Pop-Up.
- Click on the **Search** tab to use the **Find Jira issues** browser.



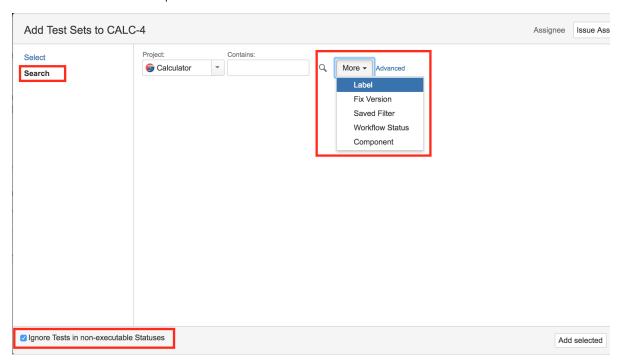
#### (ii)

#### Please note

Notice the setting for ignoring Tests in non-executable statuses at the bottom-left side. By default it will be selected, therefore restricting the shown Tests available for adding accordingly to the configuration "Disallow executions of Tests with workflow statuses".

Search Test Sets Issues - In order to search for Test Sets to be associ.ated, you can, under the Search tab:

- Browse for the desired Test Set Project or terms it Contains.
- Click on the More button to add more browse fields such as Label, Fix Version, Saved Filter and Workflow Status.
- Click on the **Magnifier** button after filling out the browse fields to get a list of matching entries.
- Click on the **Advanced** button to perform a JQL search.



**(1)** 

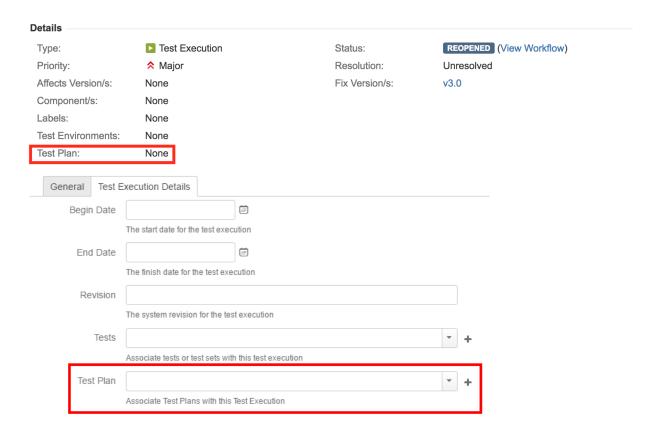
### Please note

Notice the setting for ignoring Tests in non-executable statuses at the bottom-left side. By default it will be selected, therefore restricting the shown Tests available for adding accordingly to the configuration "Disallow executions of Tests with workflow statuses".

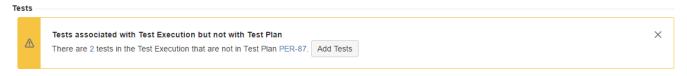
Step 4: Click Add.

## Associate with a Test Plan

You can associate Test Executions with Test Plans by editing the custom field **Test Plan** in the Test Execution issue view page, or directly in the create issue screen in the Test Execution Details tab.



If the Test Execution is associated with a **Test Plan** and contains **Tests** that are not in the **Test Plan**, a warning message will be displayed telling you how many tests in the **Test Execution** are not in the **Test Plan** with a button to add these tests to the **Test Plan**.

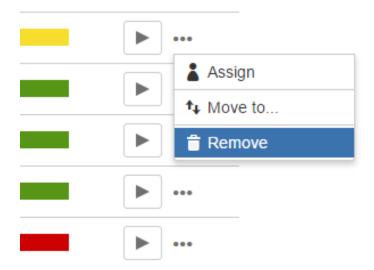


There will be one warning message for each **Test Plan** associated with the Test Execution that does not contain all the Tests in the Test Execution.

### Remove Tests

To remove Tests from the Test Execution (i.e. delete Test Runs):

- Step 1: Open the Test Execution issue.
- Step 2: Hover over the desired Test Run (under the Tests section on the view page)
- Step 3: Click the Actions button that appears in the last column. The actions menu should pop up with the available actions.
- Step 4: Click Remove action. A confirmation message appears.
- Step 5: Choose Delete to delete the Test Run or Cancel to abort this action.



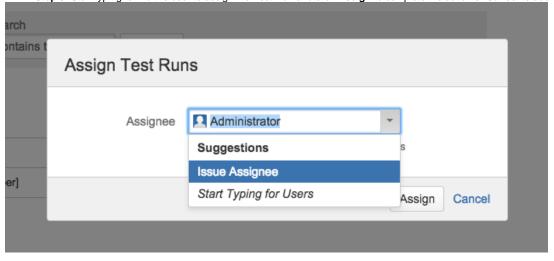
## **Assigning Work**

There are two ways to distribute work between Testers.

- A Test Execution issue can be created per Tester by assigning the issue to a specific Tester, or
- Within a Test Execution issue, you can assign individual Test Runs to Testers. Test Runs are assigned to the Test Execution issue assignee by
  default. Only users with permission to assign the Test Execution issue can assign Test Runs.

To assign individual Test Runs to testers,

- Step 1: Open the Test Execution issue.
- Step 2: Hover over the desired Test Run (under the Tests section on the view page)
- Step 3: Click the Actions button that appears in the last column. The actions menu should pop up with the available actions.
- Step 4: Click the Assign action. The assign dialog appears.
- Step 5: Start typing to find the user to assign the Test Run and click Assign to complete the action or Cancel to abort it.



## Change Test Run Rank

There are two ways to change the rank of a Test Run:

## **Drag-and-Drop**

- Step 1: Open the Test Execution issue.
- Step 2: Hover over the desired Test Run row (under the Tests section on the view page) and the drag handle column.

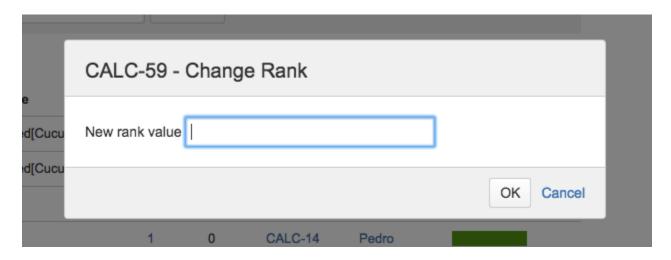
Step 3: Click the drag handle and move the Test Run up or down in the current page.

## **Change Rank Action**

This action allows users to change the Rank of a Test run between pages.

Step 1: Open the Test Execution issue.

- Step 2: Hover over the desired Test Run (under the Tests section on the view page)
- Step 3: Click the gear that appears in the last column. The actions menu should pop up with the available actions.
- Step 4: Click the Move To action. The change rank dialog appears.
- Step 5: Enter the desired index number (1-based) and click OK.



## **Execute Test**

To execute a Test from a Test Execution:

- Step 1: Open the Test Execution you wish to run.
- Step 2: Hover over the desired Test Run (under the Tests section on the view page)
- Step 3: Click the Execute button that appears in the last column. The actions menu should pop up with the available actions.
- Step 4: Click Run action to open the Execution page to start the execution.



You can see a detailed explanation of the execution screen here.

Note: If you does not have permission to execute the Test Run, the "Run" option will not be available.



#### Learn more

This action may trigger some email notification(s) depending on your Xray settings. For more info on email notifications and how to set-up them, please have a look at Test Run Email Notifications.

### **Execute Test Inline**

To execute Test Runs inline from the **Test Execution** view screen, this option must be enabled in the Xray administration page. The option for setting the Test Run status manually without having to execute all Test Steps (or Examples, in the case of Cucumber Tests) must also be enabled in the Xray administration page.

Given that the above options are enabled and you have permission to execute the Test, the context menu for executing Test Runs, accessed by the **Gear** b utton on each Test, must show the available transitions.

When executing inline Tests, the status of the manual steps (or Examples, in the case of Cucumber Tests) can be changed automatically. The following rules are applied:

- PASS: All step statuses will be changed to PASS independently of their current status.
- FAIL: All step statuses will remain unchanged, even if they are all PASS. This is because a Test might fail due to a Pre-Condition.
- TODO: All step statuses will be changed to TODO.
- ABORTED: The Test Execution status will be changed to ABORTED.
- EXECUTING: The Test Execution status will be changed to EXECUTING.
- BLOCKED: The Test Execution status will be changed to BLOCKED.
- CUSTOM: The Test Execution status will be changed to the chosen custom status.

To execute a Test Run inline:

- Step 1: Open the Test Execution issue you wish to run.
- Step 2: Click the Execute button located in the last column of the Test Runs table and select one of the available statuses.





#### Learn more

This action may trigger some email notification(s) depending on your Xray settings. For more info on email notifications and how to set-up them, please have a look at Test Run Email Notifications.

## View Test Run Details

You can always view and modify the Test Run details after execution. If you do not have permission to execute the Test Run, you can still view the execution details in read-only mode, given that you have permission to browse the Test Execution issue.

To view the execution details from a Test Run:

Step 1: Open the Test Execution you wish to view the execution details.

- Step 2: Hover over the desired Test Run (under the Tests section on the view page).
- Step 3: Click the Execute button that appears in the last column. The actions menu should popup with the available actions.
- Step 4: Click the Execution Details action to open the Execution page and view the details.



# **Bulk Operations**

Xray provides the following bulk operations on the Test Runs table.

- Execute Inline Executes inline all the selected Test Runs.
- Assign Assigns all the selected Test Runs to a particular user.
- Remove Deletes all the selected Test Runs.

To execute these bulk actions:

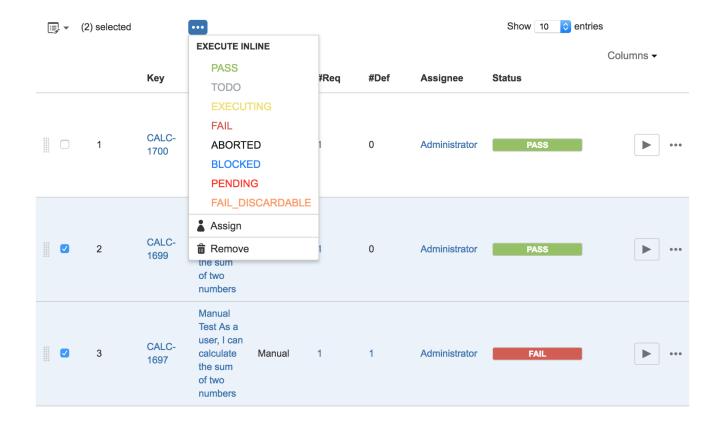
Step 1: Open the Test Execution issue.

Step 2: Select the desired Test Runs. This can be done by using the checkbox that appears on each Test Run row or, since v3.1, by using the Bulk dropdown button options for easy selecting all Test Runs or the ones in the current page.





Step 3: Click the bulk actions gear located on the actions column header and choose one of the available actions.



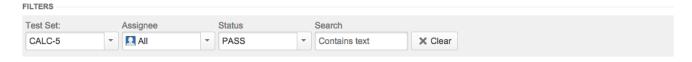
Learn more

Bulk operations may trigger some email notification(s) depending on your Xray settings. For more info on email notifications and how to set-up them, please have a look at Test Run Email Notifications.

## Filter Test Runs

To filter the Test Runs table, select the desired filters in the filters section above the Test Runs table.

- Test Set show only Test Runs that are associated with a specific Test Set issue.
- Assignee show only Test Runs that are assigned to a specific user.
- Status show only Test Runs with a specific status.
- Contains Text show only Test Runs with Tests containing the entered text. This will query Test issues with the JQL keyword text ~ ...

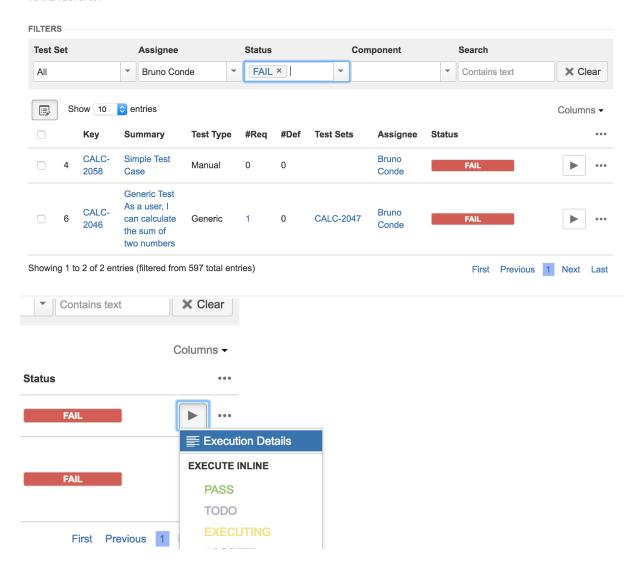


Since v3.1, the filters will be stored in the user and Test Execution context, and will be applied whenever going into the execution screen from one of the filtered Tests.



8<sub>PASS</sub> 11<sub>FAIL</sub> 1<sub>ABORTED</sub> 577<sub>TODO</sub>

**TOTAL TESTS: 597** 

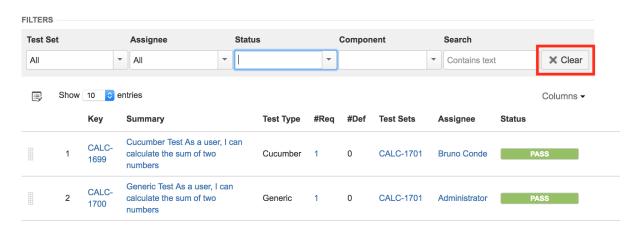


The execution screen shows a small notice, so you can quickly identify that the filter has been applied thus affecting the navigation options (Previous/Next) available in the execution screen.



If you decide to come back to the Test Execution issue screen, the filter will remain. If you wish, you can clear the filter in order to see all Test Runs once again.

**TOTAL TESTS: 597** 



# Configure Test Run Columns

More info in Test Runs.

## **Export to Cucumber**

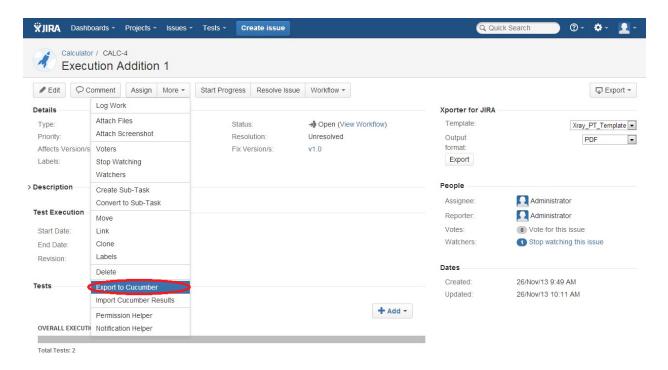
Cucumber Test Executions in JIRA can be exported to feature files ready to be executed in Cucumber. The generated feature files follow the rules defined in Export Rules and take into account the context of the Jira Test Execution issue.

A single Cucumber **feature** file should be generated and prompted to be downloaded for the Cucumber Test contained on the Test Execution, unless the target Test Execution contains multiple Cucumber Tests or the Cucumber Test is associated with multiple **Requirements.** In this case, a **FeatureBundle** zip file will be generated containing a single Cucumber feature file for every Requirement associated with the target Cucumber Test contained on the Test Execution.

To export a Test Execution issue containing Cucumber Tests to feature files,

Step 1: Open the Test Execution issue view page.

Step 2: Select More > Export to Cucumber. The file will be downloaded from the browser.



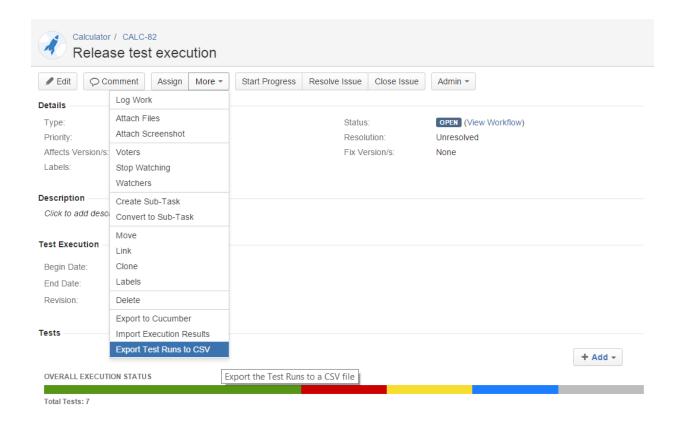
## **Export Test Runs to CSV**

Xray Test Runs can be exported to CSV. The Xray export action will export to CSV the most relevant fields for Test Runs such as:

- Test Key
- Test Execution Key
- Executed By
- Assignee
- Start
- Finish
- Defects issue keys (list separated by ",")
- Attachment Jira links (list separated by ",")
- Comment
- Status

To export a Test Run to CSV,

- Step 1: Open the Test Execution issue view page.
- Step 2: Select More > Export Test Runs to CSV. The resulting CSV file will be downloaded to the browser.



## Import Automated Test Results

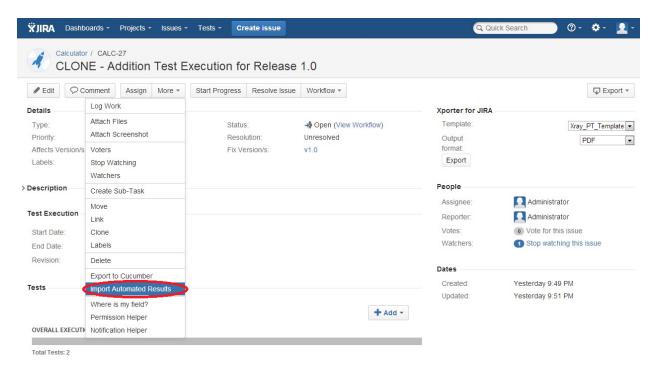
## Importing from Test Execution view issue screen

Automated Test results can be imported back to Jira using the Test Execution view issue screen. The Test results can be imported from JSON/XML external files that must follow an Import Results specific scheme.

When importing results, only the Tests contained in the interception between the Tests in the JSON/XML file and the Tests in the selected Test Execution are updated, while the remaining, if any, are ignored. After importing, a new entry with the result of the operation is registered in the Activity Log of the Test Run.

To import Automated Test results to a Test Execution issue containing automated Tests,

- Step 1: Open the Test Execution issue view page.
- Step 2: Select More > Import Automated Results. The Import Automated Test Results dialog will be prompted.



Step 3: Click the Browse button to navigate to the local disk and select the JSON/XML/ZIP file with the automated execution results for the Test Execution.

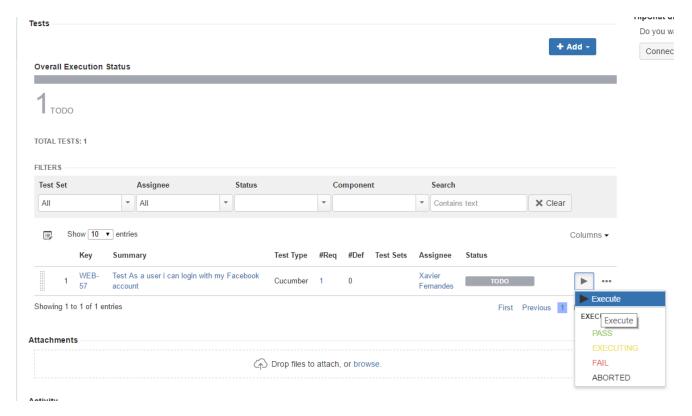
Step 4: Click Import.



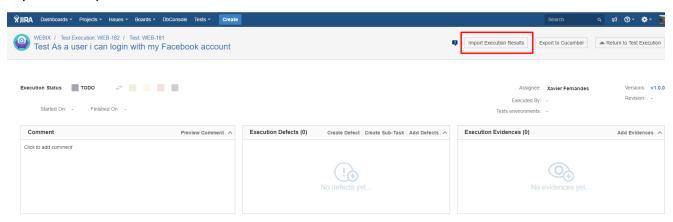
## Importing from the Execution Details Page

You can also import the Automated Test results from the Execution Details page:

**Step1:** From Test Execution view issue screen, go to the Execution Details page by clicking Execute (or by clicking Execution Details if the test has been previously executed).



Step 2: Click the Import Execution Results button.

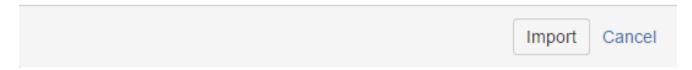


Step 3: Click the Browse button to navigate the local disk and select the JSON/XML/ZIP file with the automated execution results for the Test Execution.

# Import Execution Results

Escolher ficheiro execution\_results.json

The file with the execution results for the Test Execution.



Step 4: Click Import.

Now it is possible to filter tests by clicking on "Overall Execution Status" in Test Plans Progress Bar.

Now it is possible to view the associated Test Plans of a given Test in the Execution Details view page as shown below. Second image shows behaviour if more than 1 test plan is associated with the Test

